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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/697,876	10/31/2003	Kazuhiro Machiguchi	2003_1588A	9035

513 7590 11/02/2004

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EXAMINER
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LEE, SIN J

ART UNIT	PAPER NUMBER
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1752

DATE MAILED: 11/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/697,876

Applicant(s)

MACHIGUCHI ET AL.

Examiner

Sin J. Lee

Art Unit

1752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 01-02-04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the dye" in line 3. There is insufficient antecedent basis for this limitation in the claim. Claim 3 recites the limitation "said dye" in line 2. There is insufficient antecedent basis for this limitation in the claim. Claim 4 recites the limitation "said dye" in line 2. There is insufficient antecedent basis for this limitation in the claim. Claim 5 recites the limitation "said dye" in line 2. There is insufficient antecedent basis for this limitation in the claim. Claim 6 recites the limitation "said dye" in line 2. There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

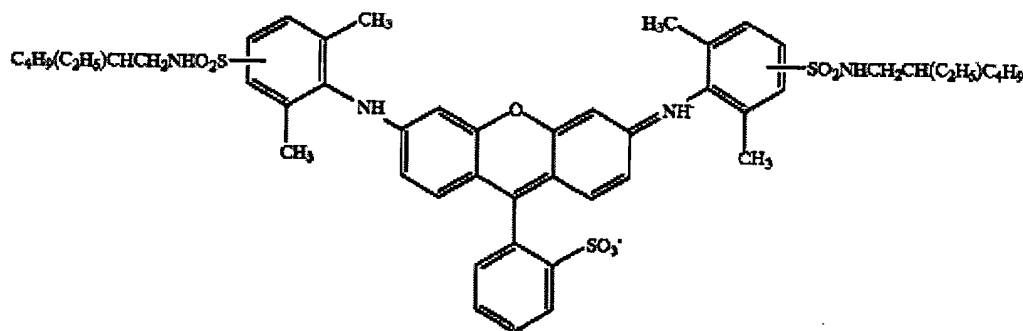
4. Claims 1 and 3-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Machiguchi et al (US 2002/0034697 A1).

Machiguchi teaches (see [0015]-[0018], [0081]) a color filter array (for solid-state image devices or liquid crystal display devices) having a *red* filter layer on a substrate in which the red filter layer comprises a photosensitive resin composition containing a xanthene dye ("dye (I)") and a pirazolone azo dye ("dye (II)"). Machiguchi teaches ([0083], [0084]) that the photosensitive resin composition may be a positive or a negative type and that the positive photosensitive resin composition comprises a *photoactive compound* and an *alkali-soluble resin* in addition to the dyes. Machiguchi also teaches ([0090]) that a *curing agent* may be incorporated into the positive photosensitive resin composition to improve the mechanical strength of the pattern formed by using the photosensitive resin composition. Machiguchi states ([0101]) that the positive photosensitive resin composition is usually diluted with a *solvent*.

Machiguchi furthermore teaches ([0089]) the amounts of the dyes, the photoactive compound, and the alkali-soluble resin to be 25-55 parts by weight, 25-55 parts by weight, and 3-50 parts by weight, respectively. Machiguchi teaches ([0100]) the amount of the curing agent to be 10-35 parts by weight. Therefore, the prior art's ranges for the amounts of dyes, photoactive compound, and curing agent overlap with present ranges of claim 1 for the amounts of dye, photoactive compound, and curing agent, and thus, the prior art's teaching would have present ranges *prima facie* obvious. In the case "where the [claimed] ranges overlap or lie inside ranges disclosed by the prior art," a *prima facie* case of obviousness would exist which may be overcome by a showing of unexpected results, In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976). Also, since the lower end of the range for the amount of the alkali-soluble resin

as taught by Machiguchi is 3 parts by weight, and since this number is close to 1 parts by weight (which is the higher end of the present range for the amount of the alkali-soluble resin), it is the Examiner's position that a *prima facie* case of obviousness would also exist as to the present range for the amount of the alkali-soluble resin. Where the claimed ranges and prior art do not overlap but are close enough that one skilled in the art would have expected them to have the same properties, a *prima facie* case of obviousness would also exist which may also be overcome by a showing of unexpected results, In re Titanium Metals Corporation of America v. Banner, 227 USPQ 773 (Fed. Cir. 1985). Therefore, Machiguchi's teaching would render obvious present inventions of claims 1, 7, and 8.

Machiguchi teaches ([0048]) that his dye (I) are compounds represented by the general formula (I) which is shown in [0048], and more specific example of such compound is used in his Example 1 and its structure is shown below:



This compound teaches present dye of the formula (I) of claim 4, present dye of the formula (10) of claim 5, and thus also teaches present dye of the formula (IV) of claim 3 (present specification state that amount the dyes of the formula (IV), a particularly

preferable dye is a compound of the formula (I) or its salt). Therefore, Machiguchi's teaching would render obvious present inventions of claims 3-5.

Machiguchi teaches that examples of his dye (II) include compounds represented by the general formula (II) which is shown in [0064]. Machiguchi also teaches that the red filter layer of the color filter array of his invention may contain other dyes for controlling the color. As examples of such dye, Machiguchi teaches "dye (III)" having the general formula (III) which is shown in [0073]. Those dyes of the formula (II) and (III) taught in Machiguchi teaches present compounds of the formulas (II) and (III). Therefore, Machiguchi's teaching would render obvious present invention of claim 6.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sin J. Lee whose telephone number is 571-272-1333. The examiner can normally be reached on Monday-Friday from 9:00 am EST to 5:30 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly, can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic  
Business Center (EBC) at 866-217-9197 (toll-free).

*S. J. Lee*

S. Lee

October 31, 2004

*Sin J. Lee*

Sin J. Lee

Patent Examiner

Technology Center 1700